PROCEDURE 1310.35
Issued: October 10, 2001
Effective Date: October 13, 2001

SUBJECT: Electronic Forms Software Functional Standard

APPLICATION: Executive Branch Departments and Sub-units

PURPOSE: To establish functional requirements for the selection of appropriate tools for
                    electronic form software. Three levels of functionality: minimum, median and
                    maximum have been identified to provide guidance for the State of Michigan.

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SUMMARY: This standard establishes functional requirements for the selection and use of
                    electronic form software that supports the creation and utilization of electronic
                    forms that are web or non-web based.

APPLICABLE FORMS: None

PROCEDURES:
General Information:

        The **objectives** guiding the identification of specific electronic form software
        functionality for State use are:

        1.   Establishment of a common electronic forms architecture
        2.   Establishment of flexibility in electronic form technology
        3.   Establishment of cross platform capabilities
        4.   Promotion of standardized development
        5.   Promotion of electronic form independence

        The **benefits** expected from the establishment of this functional standard are:

        1.   Improved support for electronic form creation
        2.   Reduced paper flow
        3.   Improved customer service
        4.   Improved business efficiencies
        5.   Improved resource and cost efficiencies
        6.   Improved End User support
        7.   Decreased data errors
        8.   Improved process responsiveness
        9.   Increased customer acceptance
        10. Improved abilities to meet regulatory and statutory requirements

        This standard is **applicable** to all state agencies requiring the use of electronic
        forms for the collection, distribution and storage of variable information in a web-
        enabled environment.

The minimum, median and maximum levels of functional requirements must incorporate the following:

1. General Functionality
2. General Support
3. Overarching Functions

General Functionality, General Support and Overarching functions serve as umbrellas under which the software specific functionality is encompassed. The intent is to identify a "*reference box"* for the functional standard.

General Functionality
Support of Internet multiple web browsers
Support for multilingual language display
Support personalization
Facilitate version control
ODBC Compliant
Support user friendly conversion capabilities
Support back-end integration
Support State Security Matrix Standard 1410.23
Provide secured access
Provide print driver independence
Provide database interface capabilities
Provide on-line processing capabilities
Provide user friendly design facilitation
General Support

Knowledge transfer support through:
-Environment setup
-Initial support
    -Targeted training
    -Tailored for agency/user need
-24/7 hour support access
    - Toll free number access
-Timely issue resolution mechanism

End user purchase of software not required for use
Overarching Functions
American Disabilities Act (ADA) Compliance for Section 508
Standard plug in utilization capabilities
Browser sensitivity
Compatibility with existing State Standards: -e.g. DMI Workflow (Standard 1310.25)

Non-proprietary
    -Nomenclature
    -Java script
    -Visual Basic

Software generally accepted by Printing and Graphic Art Industry

The **software specific functionality** was mapped to six areas of concentration:

1. Design: *form development*

2. Collection: *data collection*
3. Distribution: *form control*
4. Storage: *storage capabilities*
5. Web Capabilities: *browser based*
6. Database: *database features*

Functionality:

Giving consideration to the unique nature and needs of the various state agencies and realizing flexibility is key to enabling business processing, this standard identifies three functional thresholds: minimum, median and maximum. These thresholds taken individually or in combination establish a guideline for the evaluation of electronic forms software packages. **Each higher level threshold requires all the functionality of the preceding lower level threshold**. If the product under evaluation cannot support the functional requirements as defined, product selection is prohibited. The specification for each functional threshold is illustrated below. The identified thresholds provide flexibility for state agencies that may not require full product suites for an electronic forms solutions. <u>At the minimum threshold a form developer will be able to successfully design and implement an electronic form. At the median and maximum thresholds, a form developer working in conjunction with IT application developers, will be necessary for a successful form implementation.</u>

Software Specific Functionality:
Minimum Functionality

1. Design
Graphic User Interface for design
Security feature 　　　-Password protection for template
Ability to capture form image with minimum revision/reformatting
Ability to convert objects/fields to different data types (graphics, pictures, text, data field definition)
Ability to a produce finished form from design software 　　　-Portable Document Format (PDF) 　　　-Hard copy 　　　-Print file 　　　-Pre Press (Photo) 　　　-Additional formats
Full feature editing capabilities 　　　-Header/footers 　　　-Type setting (industry compliant) 　　　-Fonts 　　　-Colors 　　　-Form fields 　　　-Art
Spell checking capabilities at design level
Hidden text capabilities
Automatic formatting - Field Mask
Pre-fill capabilities 　　　-Date 　　　-Time

1. Design
-System data   -Personalization
Automatic text capabilities
Upgrade/Revise capabilities with no loss of fields
Ability to create list boxes, drop-downs, radio buttons and combo boxes with single or multiple selection capabilities
2. Collection - N/A
3. Distribution - N/A
4. Storage - N/A
5. Web Capabilities
Browser independent
6. Database - N/A

Median Functionality
All minimum features plus:

1. Design

Data calculation objects
     -Creation
     -Insertion

Real-time editing

Form control features
     -Data control
     -Page control

Object library feature

Ability to handle multiple data types
     -Define
     -Accept

Automatic numbering   -Unique form identifier
Customizable help features
2. Collection
User friendly client interface
Security feature   -Password protection for user

Form data collection control features
     -Data control
          --field formatting
     -Page control

2. Collection
Conditional tabbing and field features
Ability to import object/image into form

Expandable text box capabilities
     -Increase
     -Decrease
     -Control limited

Support list boxes, drop-downs, radio buttons and combo boxes   -Enhanced functionality (limited input selections)
Support list navigation with conditional controls

-Limited
Spell checking capabilities at collection level
3. Distribution
Version control capabilities
-Form creation
-Form distribution
4. Storage
Re-population capabilities
Replication of functional data and original form specification
-Presentation
Save/Continuation capabilities
Automatic file compression features
Ability to perform saves on multiple media types and retrievable for system use
-ASCII delimited
-Portable storage media
Real-time processing
5. Web Capabilities
Browser independent
6. Database - N/A

Maximum Functionality
All median features plus:

1. Design
Forms management feature at the design level
-Checkout
-Review
-Approve
Data link capabilities
-Template storage
-Summary page completion
Voice Over IP (VOIP) capabilities
2. Collection
Query capabilities
-Perform queries
-Populate form
-Results display with continuation of form processing
3. Distribution
Distribution capabilities for
-Databases
-Internal organizational units
-Forms
-External entities
-Other state agencies
-Non-state organizations
4. Storage
Ability to save forms for internal/external use with mechanism for retrieval
Separate storage facilities

-Data
-Forms
5. Web Capabilities
Browser independent
6. Database
Ability to handle Binary Large Objects (BLOB)
Support relational databases
Support multiple databases/languages
-XML
-Oracle
-Other databases/languages (Standard 1310.34)

Maintenance:

DMB: Acquisition Services shall not approve any acquisition or purchase request without confirmation from the Department of Information Technology, Office of Research and Policy that such request is in compliance with the standard.

Operational
Unit (OU):   Any and all projects, consulting requests, equipment and software acquisition requests, or ITB's relating to Electronic Forms Software data will be subject to review for compliance with this standard.

DIT: The Office of Strategic Policy will review this standard on a continuing basis and make recommendations for changes. An appropriate group of staff, representing a wide-range of State Operational Units, will review and possibly revise these standards and guidelines as often as needed.

Exceptions from this standard for reasons other than those outlined above will be made through the exception handling process described in the Exception Process Template.

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